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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

STANLEY B. MILLER III et al)	Art Unit 1615
Serial No. 09/768,016)	Examiner Susan T. Tran
Filed January 23, 2001)	
ACID-GAS ABSORBING TABLET AND METHOD OF USE)	

APPELLANTS' SUPPLEMENTAL APPEAL BRIEF

Appellants hereby request reinstatement of the appeal under 37 CFR 1.193(b)(2)(ii). All fees have been previously paid. Appellants currently appeal from the rejection dated December 11, 2003 from the Examiner.

REAL PARTY IN INTEREST

The real parties in interest are Multisorb Technologies, Inc. and Donaldson Company, Inc.

RELATED APPEALS AND INTEREFERENCES

There are no related appeals and interferences.

STATUS OF CLAIMS

Claims 3-7, 10-12 and 19-48 are pending. Claims 1, 2, 8, 9 and 13-18 have been canceled. Claims 19-27 have been objected to. Claims 3-7, 10-12 and 28-46 are being appealed. Claims 47 and 48 are being withdrawn from appeal.

STATUS OF AMENDMENTS

There were no amendments filed subsequent to final rejection. However, there were two interviews with the Examiner after final rejection, and Interview Summary records were filed by both the Examiner and the attorney of record.

Also, the Examiner reopened prosecution under 37 CFR 1.193(a)(2) after Appellants' Reply Brief.

SUMMARY OF THE INVENTION

The invention defined by the claims relates to (1) a gas-absorbing tablet (claims 3-6, 38 and 39-46), (2) a method of absorbing acid-gases from an electronic device (claims 7 and 10-12) and (3) to a method of fabricating a mixture for producing an acid-gas absorbing tablet (claims 28-37). The claims which relate to the tablet itself essentially recite an adsorbent, a binder and two basic salts (page 6, lines 3-7). One basic salt is primarily associated with the adsorbent and the other basic salt is primarily associated with the binder (claim 3). Further relative to the tablet, the preferred adsorbent is carbon or silica gel or a blend thereof (page 3, lines 11-12). Other adsorbents, such as molecular sieve and cellulose materials may be used (page 3, line 22). The preferred binder is polyvinylpyrrolidinone (page 3, line 24). Any standard tabletting binder may be substituted for the polyvinylpyrrolidinone (page 3, line 27 to page 4, line 3). A preferred basic salt which is primarily associated with the adsorbent is potassium carbonate (page 4, line 7). Other basic salts having a pH of between about 7 and 12 may be substituted for the potassium carbonate (page 4, lines 10-14). A preferred basic salt which is primarily associated with the binder is potassium bicarbonate (page 4, lines 23-24). Other basic salts having a pH of between 7 and 12 may

be substituted for the potassium bicarbonate (page 4, line 27 to page 5, line 2). The claims, such as 7, which relate to the method of absorbing acid-gases from an electronic device include substantially the same recitations as claim 3. The claims, such as 28, relate to the method of fabricating a mixture for producing an acid-gas absorbing tablet (page 6, line 16 to page 7, line 9). In this series of claims, one basic salt potassium carbonate is separately mixed with the adsorbent, and its function is to adsorb the major portion of the acid gases (page 4, lines 14-16). The other basic salt potassium bicarbonate is separately mixed with the binder, and its function is to absorb acid gases directly and thereafter also absorb the acid gases which have been adsorbed by the binder and thereafter desorbed therefrom (page 5, lines 2-5). The reason that the other basic salt potassium bicarbonate is mixed with the binder is because it mixes more readily with the binder than the potassium carbonate (page 5, lines 6-8). The separate mixture of the adsorbent and one basic salt is mixed with the separate mixture of the binder and the other basic salt, and then the combined mixture is compressed in a tablet (page 6, line 16 to page 7, line 9). The manner in which the tablet functions is set forth in the paragraph beginning on page 7, line 18 and ending on page 8, line 11. Summarizing the foregoing, the tablet contains a first basic salt which is primarily associated with the adsorbent because it is mixed separately therewith and a second basic salt which is primarily

associated with the binder because it is mixed separately therewith, and the two separate mixtures are then mixed together and the subject matter is pressed into a tablet.

ISSUES

(1) Whether claims 3-6 and 38-46 were properly rejected under 35 USC 103(a) as being unpatentable over Tuma et al.

(2) Whether claims 3-6 and 38-46 were properly rejected under 35 USC 103(a) as unpatentable over Tuma et al and McLaughlin et al.

(3) Whether claims 36 and 38-46 were properly rejected under 35 USC 103(a) as unpatentable over Tuma et al and Tanzer.

(4) Whether claims 7, 10-12 and 28-37 were properly rejected under 35 USC 103(a) as being unpatentable over Tuma et al and Osborne et al.

GROUPING OF CLAIMS

Relative to the rejection of claims 3-6 and 38-46 under 35 USC 103 as being unpatentable over Tuma, independent claims 3, 38 and 39 do not stand or fall together.

Relative to the rejection of claims 3-6 and 38-46 under 35 USC 103 as being unpatentable over Tuma and McLaughlin, independent claims 3, 38 and 39 do not stand or fall together.

Relative to the rejection of claims 3-6 and 38-46 under 35 USC 103 as being unpatentable over Tuma and Tanzer,

independent claims 3, 38 and 39 do not stand or fall together.

Relative to the rejection of claims 7, 10-12 and 28-37 under 35 USC 103 as being unpatentable over Tuma and Osborne, independent claims 7 and 28 do not stand or fall together.

The claims which are dependent on the above independent claims stand or fall with them.

ARGUMENT

The 35 USC 103 rejection based on the Tuma patent

Claims 3-6 and 38-46 were rejected under 35 USC 103 as being unpatentable over Tuma.

It is submitted that claims 3, 38 and 39 do not stand or fall together for the following reasons. Claim 3 specifically recites "a first basic salt, a second basic salt, said first basic salt being primarily associated with said adsorbent and said second basic salt being primarily associated with said binder." Claim 39 does not stand or fall with claim 3 because it is set forth in "means plus function" format wherein the specific functions of the "first blended mixture means" and "the second blended mixture means" are specifically set forth, and such functions are not at all set forth in claim 3. Claim 38 does not stand or fall with claims 3 and 39 because it presents the subject matter in an entirely different manner, namely, a first blended mixture of at least one adsorbent and a basic salt, a second blended mixture of a binder and a second basic salt, and a blended

mixture of the first and second blended mixtures. Thus, claims 3, 38 and 39 claim appellants' subject matter in entirely different manners.

In the 35 USC 103 rejection on Tuma the Examiner stated:

> "Tuma teaches shaped adsorbent articles useful in electronic device (see abstract). The article comprising mixtures of **adsorbent materials** includes activated carbon, silica gel, calcium carbonate, potassium carbonate, potassium permanganate, calcium sulfate, and sodium carbonate; and **binder** includes microcrystalline cellulose, starch, sodium silicate, and polyvinylpyrrolidone (columns 5-6). The adsorbent article can be formed using compression molding or tablet-forming method (id, column 9, lines 47-62). (Emphasis added)
>
> "**Tuma does not teach first acid salt being primarily associated with the adsorbent, and second acid salt being primarily associated with the binder**. However, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. ***In re Thorpe,*** 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Thus, it would have been obvious for one of ordinary skill in the art to, by routine experimentation determine a suitable method with the expectation of at least similar result, because Tuma teaches adsorbent article for the same purpose desired by the applicant, e.g., adsorbent article used in electronic devices to adsorb acid gas." (Emphasis added)

Appellants have reviewed the Tuma patent and note that Tuma, in column 5, lines 10-13 specifically states:

> "Suitable **adsorbent** materials include, for example, activated carbon, activated alumina, molecular sieves, silica gel, potassium permanganate, calcium carbonate, potassium carbonate, sodium carbonate, calcium sulfate, or mixtures thereof." (Emphasis added)

Tuma in column 5 specifically states at lines 29-34

"Suitable **binders** include, for example, microcrystalline cellulose, polyvinyl alcohol, starch, carboxyl methyl cellulose, polyvinylpyrrolidone, dicalcium phosphate dihydate and sodium silicate." (Emphasis added)

In column 10, lines 2-7, Tuma gives examples of shaped articles as follows:

"Typically, the shaped adsorbent article includes 70 to 98%, by weight, adsorbent material and 2 to 30%, by weight, binder. One suitable shaped adsorbent article includes about 87%, by weight, activated carbon, about 3%, by weight, potassium carbonate, and about 10%, by weight, polyvinyl pyrrolidone."

In the foregoing specific example the Tuma patent **does not** disclose four components, namely, **an adsorbent** plus **a first basic salt** plus a **binder** plus a **second basic salt** in the manner set forth in claim 3, or the "means plus function" presentation as set forth in claim 39, or in the plurality of mixed mixtures presentation of claim 38. The most that Tuma discloses in the above-quoted example is an **adsorbent**, a **binder** and a **basic salt**.

In addition to the foregoing, the above-noted subject matter of column 5, lines 10-13 of the Tuma patent 6,146,446 is part of the following paragraph in column 5, lines 3-18:

"At least a portion of the material used in the shaped adsorbent article has absorbent properties. The shaped adsorbent article is often formed using **an adsorbent material and a binder**. The adsorbent material can include physisorbents and/or chemisorbents, such as desiccants (i.e., materials that adsorb or absorb water or water vapor) and/or materials that adsorb volatile organic compounds and/or acid gas. **Suitable adsorbent materials include, for example, activated carbon, activated alumina, molecular sieves, silica gel, potassium permanganate, calcium carbonate, potassium carbonate, sodium carbonate, calcium sulfate, or mixtures thereof**. The adsorbent material may adsorb one or more types of contaminants, including, for example, water, water vapor, acid gas, and volatile organic

compounds. **Although the adsorbent material may be a single material, mixtures of materials are also useful.**" (Emphasis added)

It is submitted that lines 3-18 of the Tuma patent do not render the claims 3, 38 and 39 obvious. Claim 3 calls for four elements, namely, an adsorbent, a first basic salt primarily associated with the adsorbent, a binder, and a second basic salt primarily associated with the binder. The above-noted paragraph of Tuma merely states that mixtures of **adsorbent materials may be associated with the binder**. Tuma does not teach that one basic salt is primarily associated with the adsorbent and that another basic salt is primarily associated with the binder. Furthermore, there is absolutely no recognition in Tuma that the binder adsorbs and then desorbs acid-gases and that a separate basic salt should be primarily associated therewith because the second basic salt mixes more readily with the binder than the first basic salt and thus is better positioned for dealing with the absorbing-desorbing characteristic. It is therefore submitted that the four components recited in claim 3 are not obvious from the teaching in column 5, lines 3-18. In this respect, a composition such as disclosed in column 5, lines 3-18, includes only (1) a mixture of one or more adsorbent materials and (2) a binder.

It is submitted that claim 38 is not obvious in view of Tuma. Claim 38 recites "a first blended mixture of at least one adsorbent and a basic salt, a second blended mixture of a binder and a second basic salt, and a blended mixture of the first and second blended mixtures." It is

submitted that any haphazard combination of the various adsorbent materials recited in the Tuma patent at column 5, lines 10-13 does not render claim 38 obvious, especially since there is no recognition in Tuma the adsorption and desorption characteristic of the binder or of the manner in which the components of appellants' composition function, namely, the first basic salt which is mixed with the adsorbent absorbs most of the acid-gases, and the second basic salt which is mixed with the binder absorbs the acid-gases directly and also absorbs the acid-gases which are adsorbed and desorbed from the binder, as set forth in detail in appellants' **SUMMARY OF THE INVENTION** on pages 2 and 3 of this brief.

It is submitted that claim 39 is not obvious in view of Tuma. Claim 39 is in "means plus function" format. Claim 39 recites that the acid-gas absorbing tablet comprises "first blended mixture means for absorbing an acid-gas by converting said acid-gas into a salt and carbon dioxide and water which is adsorbed by an adsorbent therein for subsequent evaporation to the atmosphere." These "first blended mixture means" are those set forth in the specification and equivalents thereof. ***In re Donaldson Co, Inc.***, 29 USPQ 2d 1845 (CAFC 1994). It is submitted that any haphazard mixture of the absorbents recited in column 5, lines 10-13 of Tuma does not meet the foregoing means limitation because there is no specific teaching that a basic salt **must be** combined separately with an adsorbent. The

foregoing portion of Tuma merely states that **one** or a **mixture** of the recited compounds

> "activated carbon, activated alumina, molecular sieves, silica gel, potassium permanganate, calcium carbonate, potassium carbonate, sodium carbonate, calcium sulfate"

can function as an absorbent. Claim 39 further recites "second blended mixture means including a binder for binding said second blended mixture means with said first blended mixture means and for both absorbing said acid-gas by converting said acid-gas into a salt and carbon dioxide and water which is adsorbed by said adsorbent for subsequent evaporation to the atmosphere and for converting said acid-gas which is adsorbed and desorbed from said binder into a salt and carbon dioxide and water which is adsorbed by said adsorbent for subsequent evaporation to the atmosphere." These second "means" are those set forth in the specification or equivalents thereof. ***In re Donaldson Co, Inc., supra.*** It is submitted that Tuma does not even remotely teach or suggest the foregoing "second blended mixture means" limitation of claim 39, namely, the subject matter recited in the specification which is the binder and the second basic salt which perform the recited functions. Accordingly, it is submitted that claim 39 is not obvious in view of Tuma.

In the above rejection of claims 3, 38 and 39 the Examiner also stated "However, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself." It is not seen where any of the above claims 3, 38

or 39 are product-by-process claims. They are strictly composition claims wherein the components of the composition are recited. Accordingly, it is not seen where the Examiner's conclusion is applicable, namely, that "The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." If the Examiner persists in the "product by process" theory of rejection, it is requested than an explanation be given of how it applies to claims 3, 38 and 39.

The Examiner further stated "Thus, it would have been obvious for one of ordinary skill in the art to, by routine experimentation determine a suitable method with the expectation of at least similar result, because Tuma teaches an adsorbent article for the same purpose desired by the applicant, e.g., adsorbent article used in electronic devices to adsorb acid gas." The foregoing statement is fraught with inaccuracies. First of all, appellants' tablet is not an **adsorbent** article. It is an **absorbent** article because it actually absorbs acid-gases, that is, it breaks them down so that they disappear. If it adsorbed acid-gases, it would do that which the polyvinylpyrrolidinone does, namely, adsorbs and then desorbs the acid-gases. Furthermore, it is submitted that it would not have been obvious for one of ordinary skill in the art to "by routine experimentation"

arrive at appellants' claimed subject matter. In this respect, there is absolutely no recognition whatsoever in the Tuma patent that the polyvinylpyrrolidinone adsorbs and then desorbs acid-gases. Thus, since there was no recognition of the problem, it is submitted that routine experimentation would not result in appellants' claimed subject matter. In this respect, it is submitted that routine experimentation occurs when a desired known objective is pursued and various procedures are performed in an attempt to obtain the desired known objective. However, in this particular situation, the basic recognition of the adsorption and desorption problem with polyvinylpyrrolidinone was not recognized by Tuma. Accordingly, it is submitted that it cannot be concluded that routine experimentation even entered into the matter of showing that the claims were obvious over Tuma under 35 USC 103.

The rejection of claims 3-6 and 38-46 under 35 USC 103 as unpatentable over Tuma et al and McLaughlin et al

It is submitted that claims 3-6 and 38-46 are not obvious under 35 USC 103(a) over Tuma and McLaughlin. In the rejection the Examiner stated as follows:

> "Tuma is relied upon for the reason stated above. Although Tuma is relied upon for the teaching of mixture of materials, such as activated carbon, silica gel, calcium carbonate, potassium carbonate, sodium carbonate, Tuma is silent as to the teaching of mixture of the basic salts.
>
> "McLaughlin teaches blends of inorganic salts, including carbonates and bicarbonates basic salts are useful in absorbing the liquid components (column 2, lines 48-65). Thus, it would have been obvious for one of ordinary skill in the art to, by routine experiment

modify the absorbent article of Tuma using the mixture of basic salts taught by **Osborne**, because the references teach that mixture of basic salts can be used to absorb liquid components." (Emphasis added)

It is believed that the word "Osborne" is in error. It should have been McLaughlin.

First of all, it is submitted that claims 3, 38 and 39 do not stand or fall together for the reasons given above relative to the rejection of Tuma.

It is submitted that the Tuma and McLaughlin patents were improperly combined by the Examiner to establish obviousness inasmuch as there is no motivation whatsoever in either of the patents that they should be combined because they are from remote and nonanalogous arts. Furthermore, obviousness cannot be established by combining teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. ***Carella v. Starlight Archery and ProLine Co.***, 231 USPQ 644,647 (Fed. Cir. 1986), ***ACS Hospital Systems, Inc., v. Montefiore Hospital,*** 221 USPQ 929, 933 (Fed. Cir. 1984). In this respect, as noted above, Tuma relates to a composition for absorbing acid gases. McLaughlin relates to a pulverant composition for rug and carpet maintenance and cleaning. The McLaughlin composition includes borax (column 2, line 26). In the portion of the patent cited by the Examiner, namely, column 2, lines 48-65, it is specifically stated that "... a maximum of about 50%, by weight, of said borax may be replaced by one or more secondary carriers such that at least 40%, by weight of the total formulation will consist of

borax." This portion of the specification thereafter enumerates the secondary carriers which include carbonates and bicarbonates in the statement "The secondary carriers for the instant formulations are selected from inorganic salts such as the alkali and alkaline-earth metal borates, sulfates, chlorides, carbonates, bicarbonates, citrates, phosphates and nitrates, as well as various aluminum salts."

It is submitted that there is absolutely no teaching, suggestion or incentive whatsoever in the Tuma and McLaughlin patents, which are from remote and nonanalogous arts, which could possibly constitute a motivation to combine the carbonates and bicarbonates of McLaughlin's rug cleaning composition with the acid-gas absorption composition of Tuma in the manner presented by claims 3, 38 and 39. In this respect, claim 3 specifically recites "said first basic salt being primarily associated with said adsorbent, and said second basic salt being primarily associated with said binder." Claim 38 specifically recites "a first blended mixture of at least one adsorbent and a basic salt, a second blended mixture of a binder and a second basic salt, and a blended mixture of said first and second blended mixtures." Claim 39 specifically recites the subject matter in "means plus function" format. It is submitted that the mere mention that McLaughlin's rug cleaning composition may include carbonates and bicarbonates as a substitute for borax in a rug cleaning composition does not constitute motivation for combining McLaughlin with Tuma to render obvious the foregoing recitations of claims 3, 38 and 39.

In the rejection the Examiner stated "...it would have been obvious for one of ordinary skill in the art to, by routine experiment modify the absorbent article of Tuma using the mixture of basic salts taught by Osborne, because the references teach that mixture of basic salts can be used to absorb liquid components." As noted above, it is believed that the word "Osborne" is in error. It should have been McLaughlin. It is submitted that the idea of routine experimentation based on a combination of McLaughlin with Tuma does not make sense because of the great diversity of the teachings of the two patents. In other words, what the Examiner is saying is, that with a knowledge of an acid-gas absorbing composition such as shown in Tuma, a person skilled in the art would have knowledge or somehow find McLaughlin, which is for a carpet cleaning composition which may include carbonates and bicarbonates as a substitute for borax, and thereafter experiment with the salts of McLaughlin to combine them with the teaching of Tuma to obtain appellants' claimed composition. It is submitted that this reasoning is untenable, especially considering that there is absolutely no motivation whatsoever in either of the references that they should be combined.

The rejection of claims 3-6 and 38-46 under 35 USC 103 as unpatentable over Tuma et al and Tanzer et al

In the rejection of claims 3-6 and 38-46 as being unpatentable over Tuma and Tanzer the Examiner stated:

> "Tuma is relied upon for the reason stated above. Although Tuma is relied upon for the teaching of mixture of materials, such as activated carbon, silica gel,

calcium carbonate, potassium carbonate, sodium carbonate, Tuma is silent as to the teaching of mixture of the basic salts.

"Tanzer teaches an absorbent article comprising mixture of basic salt, including carbonates and bicarbonates (column 5, lines 25-32). Thus, it would have been obvious for one of ordinary skill in the art to, by routine experiment modify the absorbent article of Tuma using the mixture of basic salts taught by Tanzer, because the references teach that mixture of basic salts is useful in absorbent article."

First of all, it is submitted that claims 3, 38 and 39 do not stand or fall together for reasons given above relative to the rejection on Tuma.

Here again, it is submitted that there is no motivation to combine the Tuma and Tanzer patents considering that they are from remote and nonanalogous arts and because there is no teaching, suggestion or incentive to combine them, as required to establish obviousness. ***Carella v. Starlight Archery and ProLine Co., supra; ACS Hospital Systems, Inc., v. Montefiore Hospital, supra.*** As noted above, the Tuma patent relates to a composition for absorbing acid-gases. The Tanzer patent relates to an absorbent article for absorbing and retaining human exudate. In the patent the absorbent article which absorbs human exudate is defined as a diaper, feminine pad, panty liner, incontinent garment, underarm shield or bed pad. (Column 1, lines 62-63) They are designed, according to the patent, to be worn by humans to absorb a quantity of urine, menstrual fluid, perspiration, etc. (column 1, lines 14-16). The device is a member which contains an anhydrous deodorant (column 2, lines 13-14). In the portion of Tanzer referred to by the

Examiner, namely, column 5, lines 25-32, there is a description of the basic controlling particles of the deodorizing mixture and this portion of the specification further states "Typical of such basic odor control particles are inorganic salts of carbonates, bicarbonate, phosphate, biphosphate, sulfate, bisulfate and mixtures thereof. A preferred basic odor absorbing material is sodium bicarbonate because it is low in cost, safe to use and its effectiveness has been established ..."

It is submitted that there is absolutely no motivation to combine Tanzer with Tuma considering that both patents are from remote and non-analogous arts, and further, especially because there is absolutely no teaching, suggestion or incentive within the patents themselves that would render it obvious to combine them. Also, all that Tanzer does is disclose a number of odor absorbing compounds which can be a part of his article for absorbing human exudate. Claim 3 specifically recites "said first basic salt being primarily associated with said adsorbent, and said second basic salt being primarily associated with said binder." Claim 38 specifically recites "a first blended mixture of at least one adsorbent and a basic salt, a second blended mixture of a binder and a second basic salt, and a blended mixture of said first and second blended mixtures." Claim 39 specifically recites the subject matter in "means plus function" format. It is submitted that the mere mention that Tanzer's absorbent article for absorbing and retaining exudates contains basic odor control particles such as

carbonates and bicarbonates does not constitute motivation or a teaching for combining Tanzer with Tuma to render obvious the foregoing recitations of claims 3, 38 and 39.

In the rejection the Examiner stated "Thus, it would have been obvious for one of ordinary skill in the art to, by routine experiment modify the absorbent article of Tuma using the mixture of basic salts taught by Tanzer, because the references teach that mixture of basic salts is useful in absorbent article." It is submitted that the Examiner's reasoning is untenable because the fact that Tanzer teaches that the mixture of basic salts is useful in an absorbent article to absorb the odor from exudate, does not give any indication or suggestion that acid-gases can be absorbed by compositions defined in claims 3, 38 and 39 wherein essentially one basic salt is primarily associated with an absorbent and another basic salt is primarily associated with a binder, as set forth in claim 3, or wherein an acid-gas absorbing tablet comprises a first blended mixture of at least one absorbent and a basic salt and a second blended mixture of a binder and a second basic salt and a blended mixture of the first and second blended mixtures, as recited in claim 38, or an acid-gas absorbing tablet comprising first blended mixture means for absorbing an acid-gas ... etc. and second blended mixture means including a binder for binding said second blended mixture means with said first blended mixture means and for both absorbing the acid-gas and for absorbing acid-gas which was

adsorbed and desorbed from the binder, as recited in claim 39.

Accordingly, it is submitted that claims 3, 38 and 39 were not properly rejected under 35 USC 103 because there is no motivation or teaching to combine the patents, and further because routine experimentation is not an issue because the basic concept of appellants' subject matter is nowhere to be found in either of the patents. In the latter respect, it is submitted that for routine experimentation to occur, there must at least be a basic concept which provides an underlying framework from which routine experimentation can be carried out.

The rejection of claims 7, 10-12 and 28-37 under 35 USC 103 as unpatentable over Tuma et al and Osborne et al

First of all, it is submitted that independent claims 7 and 28 do not stand or fall together.

Claim 7 is directed to a method of absorbing acid gases from an electronic device comprising providing a gas absorbing tablet which includes a first basic salt primarily associated with an adsorbent and a second basic salt primarily associated with a binder and installing the acid-gas absorbing tablet in an electronic device.

Claim 28 does not stand or fall with claim 7 because it is directed to a method of fabricating a mixture for producing an acid-gas absorbing tablet and it includes the steps of blending an adsorbent with a first basic salt to produce a first mixture, blending a binder with a second basic salt to produce a second mixture and blending the first

and second mixtures. Obviously, claim 28 differs entirely in subject matter from claim 7.

In the 35 USC 103 rejection the Examiner stated that claims 7, 10-12 and 28-37 were rejected as being unpatentable over Tuma and Osborne. In the body of the rejection the Examiner stated

> "Tuma is relied upon for the reasons stated above. **Tuma is silent as to the limitation of second basic salt is associated with the binder.** However, it is the position of the examiner that one of ordinary skill in the art would by routine experimentation determine a suitable process with the expectation of at least similar result, because Tuma teaches the use of adsorbent article containing the same material, same shape, and for the same purpose, absorbing acid gas to protect electronic devices from contaminants. (Emphasis added)
>
> "Tuma is silent as to the teaching of sodium or potassium bicarbonate.
>
> **"Osborne teaches adsorbent composition comprising activated carbon powder, activated alumina, water, and sodium bicarbonate (columns 5-6).** Thus, it would have been prima facie obvious for one of ordinary skill in the art to prepare Tuma's adsorbent article using basic salts taught by Osborne, because the references suggest the use of basic salts in adsorbent composition to filter fluid, such as air within electronic devices. The expected result would be an adsorbent article in a variety of shapes useful to be placed in smaller spaces, such as disk drives." (Emphasis added)

In the rejection the Examiner stated that "...one of ordinary skill in the art would by routine experimentation determine a suitable process with the expectation of at least similar result, because Tuma teaches the use of adsorbent article containing the same material, same shape, and for the same purpose, absorbing acid gas to protect electronic devices from contaminants." First of all, Tuma does not contain the same material as recited in claims 7 and 28.

Claim 7 recites "a first basic salt primarily associated with said adsorbent, a second basic salt primarily associated with said binder." Tuma merely discloses a mixture of one or more adsorbents and a binder. Claim 28 recites the steps of blending the adsorbent with a first basic salt to produce a first mixture, blending a second basic salt with a binder to produce a second mixture, and blending the first and second mixtures. Tuma does not disclose a blended mixture of first and second mixtures. Also, it is submitted that since appellants' recognition of the adsorption-desorption problem of the binder and the concept for remedying it is nowhere suggested in Tuma, routine experimentation is not an option because the experimentation must be based on knowledge of a known problem.

It is submitted that there is no motivation to combine Osborne with Tuma because neither have recognized the problem solved by appellants nor have they in any way given any indication of a solution therefor. Furthermore, there is no teaching, suggestion or incentive supporting the combination of references to render the claims obvious. ***Carella v. Starlight Archery and ProLine Co, supra; ACS Hospital Systems, Inc., v. Montefiore Hospital, supra.*** As noted above, appellants have recognized the adsorption and desorption characteristic of a binder for an acid-gas absorbing tablet, and appellants have overcome this characteristic by primarily associating a separate basic salt therewith. Tuma relates to a gas-absorption tablet which includes an adsorbent or a mixture of adsorbents and a

binder, as discussed above in detail relative to the rejection on Tuma under 35 USC 103. Tuma does not recognize that the binder adsorbs and desorbs acid-gases. Osborne relates to a composition for removal of compounds having toxic or corrosive properties, especially sulfur containing compounds (column 1, line 10) from gaseous streams. More specifically, it relates to a filter bed substrate incorporating a mixture of activated carbon and activated alumina (column 1, lines 12-13). The composition **may** also contain sodium bicarbonate (column 4, line 59) **to impart strength to pellets of the composition, reduce flammability of the filter bed and may synergistically assist the chemical reactions** (column 4, lines 56 et seq.). The composition may also include impregnates (column 4, lines 67 et seq. and column 6, lines 32-42). The teaching of Osborne is that sodium bicarbonate may be used in a composition containing activated carbon and activated alumina for the above-noted purposes.

Based on the foregoing, it is submitted that Tuma and Osborne are from remote and nonanalogous arts, and they do not provide motivation for their combination to render claims 7 and 28 obvious, considering that there is no teaching, suggestion or incentive to combine the patents. In this respect, claim 7 recites "a first basic salt primarily associated with said adsorbent, and a second basic salt primarily associated with said binder." Claim 28 recites the method of fabricating a mixture for producing an acid-gas absorbing tablet by blending a first mixture of an adsorbent

and a first basic salt, and blending a second mixture of a binder and a second basic salt, and blending the first and second mixtures. It is submitted that the greatly different teachings of Tuma and Osborne, as discussed above, do not provide the necessary teaching, suggestion or incentive supporting the combination of references to render claims 7 and 28 obvious.

CONCLUSION

In view of the foregoing remarks, it is submitted that the rejection of claims 3-7, 10-12 and 28-46 be reversed.

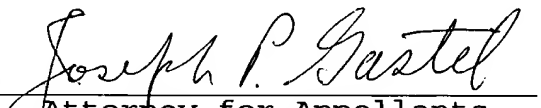
Three copies of this supplemental brief are being submitted.

As noted above, all fees have been previously paid. If any additional fees are due, they may be charged to Account No. 07-0450 of the undersigned.

Respectfully submitted,

STANLEY B. MILLER III ET AL

JOSEPH P. GASTEL

By 

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APPENDIX - APPLN. SERIAL NO. 09/768,016

3. An acid-gas absorbing tablet comprising in relatively sufficient proportions by weight at least one adsorbent, a binder, a first basic salt, a second basic salt, said first basic salt being primarily associated with said adsorbent, and said second basic salt being primarily associated with said binder.

4. An acid-gas absorbing tablet as set forth in claim 3 wherein said first basic salt is selected from the group consisting of sodium and potassium carbonates and bicarbonates.

5. An acid-gas absorbing tablet as set forth in claim 3 wherein said first basic salt and said second basic salt are selected from the group consisting of sodium and potassium carbonates and bicarbonates.

6. An acid-gas absorbing tablet as set forth in claim 3 wherein said first basic salt is selected from the group consisting of sodium and potassium carbonates, and said second basic salt is selected from the group consisting of sodium and potassium bicarbonates.

7. A method of absorbing acid gases from an electronic device comprising the steps of providing an acid-gas absorbing tablet comprising in relatively sufficient proportions by weight at least one adsorbent, a binder, a first basic salt primarily associated with said adsorbent, a second basic salt primarily associated with said binder, and installing said acid-gas absorbing tablet in said electronic device.

10. A method as set forth in claim 7 wherein said first basic salt is selected from the group consisting of sodium and potassium carbonates and bicarbonates.

11. A method as set forth in claim 7 wherein said first basic salt and said second basic salt are selected from the group consisting of sodium and potassium carbonates and bicarbonates.

12. A method as set forth in claim 7 wherein said first basic salt is selected from the group consisting of sodium and potassium carbonates, and wherein said second basic salt is selected from the group consisting of sodium and potassium bicarbonates.

19. An acid-gas absorbing tablet as set forth in claim 3 wherein there are present by weight said adsorbent in the amount of between about 73% and 93%, polyvinylpyrrolidinone as the binder in an amount of between 4.2% and 25.1%, potassium bicarbonate as said second basic salt in an amount of between about 0.4% and 6.7%, potassium carbonate as said first basic salt in an amount of between about 0.2% and 8.4%, and water in an amount of between 0% and 30%.

20. An acid-gas absorbing tablet as set forth in claim 19 wherein said adsorbent is a blend of activated carbon and silica gel.

21. An acid-gas absorbing tablet as set forth in claim 20 wherein said blend is in any proportions including total activated carbon or total silica gel.

22. An acid-gas absorbing tablet as set forth in claim 19 wherein said adsorbent is present in an amount of between about 78% and 88%, and wherein said polyvinylpyrrolidinone is present in an amount of between about 8.3% and 16.8%, and wherein said potassium bicarbonate is present in an amount of between about 1.4% and 3.9%, and wherein said potassium carbonate is present in an amount of between about 0.8% and 4.2% and wherein said water is present in an amount of between about 0% and 15%.

23. An acid-gas absorbing tablet as set forth in claim 22 wherein said adsorbent is a blend of activated carbon and silica gel.

24. An acid-gas absorbing tablet as set forth in claim 23 wherein said blend is in any proportions including total activated carbon or total silica gel.

25. An acid-gas absorbing tablet as set forth in claim 19 wherein said adsorbent is present in an amount of between about 80% and 85%, and wherein said polyvinylpyrrolidinone is present in an amount of between about 9.2% and 10.9%, and wherein said potassium bicarbonate is present in an amount of between about 2.6% and 3.1%, and wherein said potassium carbonate is present in an amount of between about 1.6% and 2.5% and wherein said water is present in an amount of between about 0% and 2%.

26. An acid-gas absorbing tablet as set forth in claim 25 wherein said adsorbent is a blend of activated carbon and silica gel.

27. An acid-gas absorbing tablet as set forth in claim 26 wherein said blend is in any proportions including total activated carbon or total silica gel.

28. A method of fabricating a mixture for producing an acid-gas absorbing tablet comprising the steps of providing an adsorbent and a first basic salt, blending said adsorbent and said first basic salt to produce a first mixture, providing a binder and a second basic salt, blending said binder and said second basic salt to produce a second mixture, and blending said first and second mixtures.

29. A method of fabricating a mixture as set forth in claim 28 wherein said first basic salt and said second basic salt are selected from the group consisting of sodium and potassium carbonates and bicarbonates.

30. A method of fabricating a mixture as set forth in claim 28 wherein said first basic salt is selected from the group consisting of sodium and potassium carbonates, and wherein said second basic salt is selected from the group consisting of sodium and potassium bicarbonates.

31. A method of fabricating a mixture as set forth in claim 28 wherein said adsorbent is a blend of activated carbon and silica gel.

32. A method of fabricating a mixture as set forth in claim 31 wherein said first basic salt and said second basic salt are selected from the group consisting of sodium and potassium carbonates and bicarbonates

33. A method of fabricating a mixture as set forth in claim 31 wherein said first basic salt is selected from the group consisting of sodium and potassium carbonates, and wherein said second basic salt is selected from the group consisting of sodium and potassium bicarbonates.

34. A method of fabricating a mixture as set forth in claim 31 wherein said blend of adsorbent is in any proportions including total activated carbon or total silica gel.

35. A method of fabricating a mixture as set forth in claim 34 wherein said first basic salt and said second basic salt are selected from the group consisting of sodium and potassium carbonates and bicarbonates.

36. A method of fabricating a mixture as set forth in claim 34 wherein said first basic salt is selected from the group consisting of sodium and potassium carbonates, and wherein said second basic salt is selected from the group consisting of sodium and potassium bicarbonates.

37. A method of fabricating said acid-gas absorbing tablet from the mixture set forth in claim 28 including the step of pressing said blend of said first and second mixtures into a tablet.

38. An acid-gas absorbing tablet comprising a first blended mixture of at least one adsorbent and a basic salt, a second blended mixture of a binder and a second basic salt, and a blended mixture of said first and second blended mixtures.

39. An acid-gas absorbing tablet comprising first blended mixture means for absorbing an acid-gas by converting said acid-gas into a salt and carbon dioxide and water which is adsorbed by an adsorbent therein for subsequent evaporation to the atmosphere, and second blended mixture means including a binder for binding said second blended mixture means with said first blended mixture means and for both absorbing said acid-gas by converting said acid-gas into

a salt and carbon dioxide and water which is adsorbed by said adsorbent for subsequent evaporation to the atmosphere and for converting said acid-gas which is adsorbed and desorbed from said binder into a salt and carbon dioxide and water which is adsorbed by said adsorbent for subsequent evaporation to the atmosphere.

40. An acid-gas absorbing tablet as set forth in claim 39 wherein said first blended mixture means comprises at least one adsorbent and a first basic salt, and wherein said second blended mixture means comprises said binder and a second basic salt.

41. An acid-gas absorbing tablet as set forth in claim 40 wherein said first basic salt is selected from the group consisting of sodium and potassium carbonates and bicarbonates.

42. An acid-gas absorbing tablet as set forth in claim 41 wherein said second basic salt is selected from the group consisting of sodium and potassium carbonates and bicarbonates.

43. An acid-gas absorbing tablet as set forth in claim 42 wherein said binder is polyvinylpyrrolidinone.

44. An acid-gas absorbing tablet as set forth in claim 40 wherein said first basic salt is selected from the group consisting of sodium and potassium carbonates.

45. An acid-gas absorbing tablet as set forth in claim 44 wherein said second basic salt is selected from the group consisting of sodium and potassium carbonates.

46. An acid-gas absorbing tablet as set forth in claim 45 wherein said binder is polyvinylpyrrolidinone.

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